

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-41. (Canceled)

42. (Currently amended) A method for determining whether a test colon cell has an ulcerative colitis (UC) or Crohn's disease (CD) phenotype, said method comprising:

(a) determining an expression level of each of the following genes in said test colon cell:

(i) a macrophage inflammatory protein-2 β (GRO3) gene ~~product in said test colon cell;~~

~~(b) determining an expression level of~~ (ii) a neutrophil lipocalin (HNL) gene ~~product in said test colon cell;~~

~~(c) determining an expression level of~~ (iii) a macrophage elastase (MMP-12) gene ~~product in said test colon cell;~~

~~(d) determining an expression level of~~ (iv) an elastase specific inhibitor (elafin) gene ~~product in said test colon cell; and~~

~~(e) determining an expression level of~~ (v) a type VI collagen $\alpha 3$ chain (COL6A3) gene ~~product in said test colon cell;~~

[[f)] (b) comparing the expression level of each of said ~~gene products~~ GRO3, HNL, MMP-12, elafin, and COL6A3 genes in said test colon cell to an expression level of the same gene ~~product~~ in a normal colon cell;

[[g)] (c) associating an increase in the expression level of ~~said GRO3 gene product, said HNL gene product, said MMP-12 gene product, said elafin gene product, or said COL6A3 gene product~~ each of said GRO3, HNL, MMP-12, elafin, and COL6A3 genes in said test colon cell relative to the expression level of the same gene ~~product~~ in said normal colon cell with a UC phenotype in said test colon cell; and

22 ~~[[**(h)**]]~~ (d) associating an increase in the expression level of each of said MMP-12 **gene**
23 ~~**product or said**~~ and elafin **gene-product** genes in said test colon cell relative to the expression
24 level of the same gene ~~**product**~~ in said normal colon cell and a normal expression level of each
25 of said GRO3, HNL, and COL6A3 genes with a CD phenotype in said test colon cell.

1 43. (Canceled)

1 44. (Canceled)

1 45. (Currently amended) The method of claim 42, ~~**comprising distinguishing**~~
2 ~~**between**~~ wherein said method distinguishes a UC phenotype ~~[[or]]~~ from a CD phenotype in said
3 test colon cell.

1 46. (Currently amended) The method of claim 42, wherein said test colon cell
2 has a UC phenotype when the expression level of ~~**said GRO3 gene-product**~~ each of said GRO3,
3 HNL, MMP-12, elafin, and COL6A3 genes in said test colon cell is increased relative to the
4 expression level of the same gene ~~**product**~~ in said normal colon cell by at least a factor of two.

1 47. (Previously presented) The method of claim 42, wherein said test colon
2 cell is obtained from a needle biopsy core, a surgical resection sample, or a bowel sample.

1 48. (Currently amended) The method of claim 42, wherein the expression
2 level of said ~~**gene-products**~~ genes is determined using Northern blot analysis, reverse
3 transcription-polymerase chain reaction, in situ hybridization, or an array.

1 49. (Currently amended) The method of claim 48, wherein said array
2 comprises:

3 (a) nucleic acid probes of 12-40 nucleotides in length, wherein said nucleic acid probes
4 are complementary to said ~~**gene-products**~~ genes and hybridize under high stringency conditions
5 to said ~~**gene-products**~~ genes; and

6 (b) a substrate to which said nucleic acid probes are bound.

1 50. (Previously presented) The method of claim 49, wherein said substrate is
2 selected from the group consisting of paper, membranes, filters, chips, pins, and glass.

1 51. (Previously presented) The method of claim 49, wherein said nucleic acid
2 probes are bound to said substrate by covalent bonds or hydrophobic interactions.

1 52. (Previously presented) The method of claim 49, wherein said nucleic acid
2 probes are spotted onto said substrate in a two-dimensional matrix or array.

1 53. (Canceled)

1 54. (Currently amended) The method of claim 42, wherein said test colon cell
2 has a CD phenotype when the expression level of each of said MMP-12 ~~gene-product~~ and elafin
3 genes in said test colon cell is increased relative to the expression level of the same gene
4 ~~product~~ in said normal colon cell by at least a factor of two and the expression level of each of
5 said GRO3, HNL, and COL6A3 genes is normal.

1 55. (Canceled)

1 56. (Canceled)